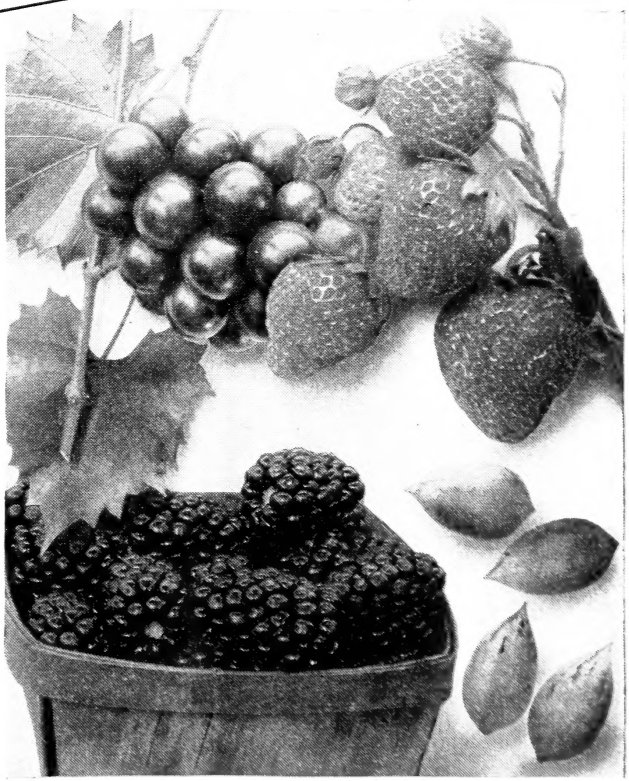
The Home FRUIT GARDEN in the Central Southwestern States



LEAFLET
NO. 221

U. S. DEPARTMENT of AGRICULTURE

THE HOME FRUIT GARDEN IN THE CENTRAL SOUTHWESTERN STATES[1]

The National Nutrition Conference, held in Washington, D. C., November 1941, urged Americans to eat more fruits. Well-ripened, sound fruits increase the healthfulness, variety, attractiveness, and palatability of meals. Despite the relatively large available supplies of fruit, many families, especially on farms, do not have adequate quantities in the diet. By properly selecting the kinds and varieties of fruit for home planting, a succession of fresh fruit of high dessert quality can be available during much of the summer season, and surpluses may be canned, preserved, dried, or, in some cases, frozen for use during other seasons. Do not let the fruit go to waste.

This leaflet lists the best kinds and varieties of fruits and nuts for home planting in the central Southwestern States and gives brief directions for their care. Detailed information can be obtained from the State agricultural extension service or agricultural college in each.

Climatic Districts for Fruit and Nuts

Summer and winter temperatures, rainfall, and prevalence of diseases and insects are all important in determining the fruit and nut varieties that can be grown in the different parts of the country. Varieties differ greatly in their adaptation, but some kinds can be grown in almost every home garden in this region. On the map (fig. 1) the central Southwestern States are divided into districts based chiefly on the length of the growing season. In general, the same fruit and nut varieties can be grown throughout a district.

Kinds and Varieties to Plant

Under most conditions in the southern part of the region the best fruits and nuts for the home garden are, in order of adaptability where spraying is not practiced, (1) grapes (muscadine), (2) pecans, (3) figs, (4) dewberries, (5) strawberries, (6) blackberries, (7) bunch grapes, (8) peaches, and (9) plums. Under the more subtropical conditions, several citrus fruits, guavas, oriental persimmons, feijoas, loquats, pomegranates, and many other fruits may be grown. In certain locations black walnuts, Chinese chestnuts, and filberts may well be included. In the northern part of the region, (1) strawberries, (2) bunch grapes (American), (3) sour cherries, (4) plum and cherry hybrids, (5) plums, (6) peaches, and (7) apples are most widely adapted.

In all areas fruit trees and bunch grapes are benefited by proper spraying, and in the vicinity of commercial orchards and vineyards fruits in the home garden should be sprayed to prevent the spread of insects and diseases. In almost every district, however, certain fruits and nuts can be grown that do not require spraying and that add greatly to the variety and healthfulness of the diet.

Varieties recommended for medium-sized gardens are listed in table 1. Some of these suggested are different from those grown in commercial plantings. Usually more than one variety is listed in order to cover a long season.

[1] Prepared by the staff of the Division of Fruit and Vegetable Crops and Diseases, Bureau of Plant Industry, with the collaboration of horticulturists of the States in the region. The varieties suggested herein are based on those recommended by these horticulturists.

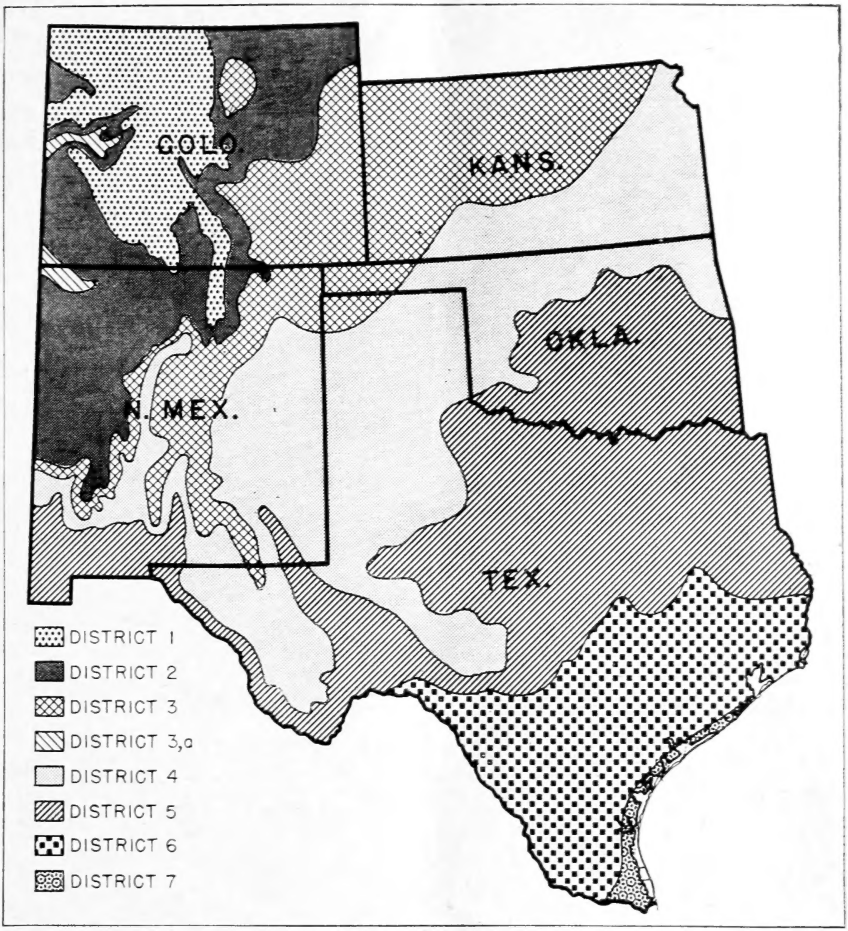


FIGURE 1.—Map of the central Southwestern States. District 1—low winter temperatures; growing season less than 90 days; not adapted to the growing of fruits except for selected sheltered valleys and sunny slopes where especially hardy and early-maturing varieties may be grown with winter protection. District 2—growing season 90 to 150 days; restricted rainfall makes irrigation necessary or desirable; fruits that succeed must be fully winter-hardy and early-maturing. District 3—growing season 150 to 180 days; restricted rainfall; irrigation in all but the more eastern part necessary or desirable for most fruit varieties; in the more northern parts standard northern varieties are preferred, while in more southern parts selected northern varieties and representatives of the standard southern groups are the most desirable fruits. District 3a—more favorable temperature conditions and water for irrigation make possible the growing of less hardy varieties. District 4—growing season 180 to 210 days; in the eastern part where rainfall is sufficient considerable fruit can be grown; much of the area, however, is included in the southern Great Plains where rainfall is low and irrigation is necessary, or at least desirable, for fruit growing. (Soil-moisture conditions determine largely what varieties can be grown successfully.) District 5—growing season 210 to 250 days; a considerable variety of fruits adapted to much of this district; in selected locations in the western part vinifera grapes may be grown successfully. District 6—growing season 250 days or more; muscadine and southern bunch grapes, figs, dewberries, and other fruits, as well as pecans, do well in much of this district; along the southern border even hardy citrus fruits may be grown. District 7—frosts rare; subtropical fruits grown.

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TABLE 1.—*Varieties suggested for medium-sized gardens in districts 1 to 6 of figure 1*

DISTRICT 1 (HIGH MOUNTAINOUS AREAS OF COLORADO AND NORTHERN NEW MEXICO)

Fruit or nut [1]	Variety for whole or designated part	When ripe	Plants	Length of row	Fruit or nut [1]	Variety for whole or designated part	When ripe	Plants	Length of row
			No.	*Feet*				*No.*	*Feet*
Strawberry.[2]	Gem	Everbearing.	80	120	Cherry-plum hybrid.	Sapa	July–Aug.	4	40
	Dunlap	June–July.	60	120		Opata	do	4	40
Raspberry.[2]	Chief	July	50	125		Compass	do	4	40
	Latham	do	50	125	Apple	Yellow Transparent.	do	1	30
Sour cherry.	Montmorency	July–Aug.	4	80		Oldenburg	Aug.–Sept.	1	30
						Wealthy	Sept.–Oct.	1	30
						McIntosh	do	1	30

DISTRICT 2 (NORTHWESTERN, FOOTHILL, AND SOUTHWESTERN PORTIONS OF COLORADO AND MOST OF NORTHWESTERN NEW MEXICO; IRRIGATION REQUIRED)

Strawberry.[2]	Dunlap	June	50	100	Raspberry.[2]	Latham	June	30	75
	Gem	June–Sept.	50	75					
Cherry-plum hybrid.	Compass	July–Aug.	3	30	Plum[3]	Lacrescent	Aug.	2	40
	Sapa	do	3	30		Omaha	Sept.	2	40
	Opata	do	3	30		Monitor	do	2	40
Sour cherry.	Montmorency	July	4	80	Apple	Yellow Transparent.	Aug.	1	60
Grape[2 4]	Beta	Sept.	5	40		Oldenburg	do	1	60
						Wealthy	Sept.	1	60
						McIntosh	do	1	60

DISTRICT 3 (NORTHERN AND WESTERN KANSAS, SOUTHEASTERN COLORADO, AND PORTIONS OF NORTHEASTERN AND CENTRAL NEW MEXICO; IRRIGATION NECESSARY OR DESIRABLE IN THE WESTERN PORTIONS WHERE RAINFALL IS LESS THAN 25 INCHES)

Strawberry.	Dunlap	June	50	100	Peach	Early Wheeler	July	2	40
	Mastodon	do	50	75		Champion	Aug.	2	40
Grape	Delaware	July	5	40		Elberta	do	2	40
	Niagara	do	5	40	Pear	Seckel	do	1	20
	Concord	do	5	40		Kieffer	Sept.	1	20
Blackberry.	Eldorado (east).	June–July	20	80		Douglas	do	1	20
	Lucretia (east).	June	20	100	Apple	Yellow Transparent.	July	1	30
Dewberry	Young (south; west).[5]	do	20	120		Oldenburg	Aug.	1	30
						Jonathan	Aug.–Sept.	1	30
Plum	Waneta	June–July	5	100	Jujube	Lang	do	1	15
	America	July	5	100		Sui Men	do	1	15
Cherry-plum hybrid.	Opata	June	3	30		Li	do	1	15
	Sapa	do	3	30	Gooseberry.	Glendale (eastern Kansas).	June	2	10
	Compass	do	3	30					

DISTRICT 3A (RESTRICTED RIVER-VALLEY AREAS IN WESTERN AND SOUTHWESTERN COLORADO AND NORTHWESTERN NEW MEXICO)

Strawberry.	Gem	June	50	75	Plum	Beauty	July	2	40
	Catskill	do	50	100		Santa Rosa	Aug.–Sept.	2	40
Raspberry.	Newburgh	June–July	30	75		Italian Prune	do	2	40
	Indian Summer.	June–July; Sept.	30	75	Pear	Bartlett	do	1	20
						Gorham	do	1	20
Dewberry	Boysen	July–Aug.	10	60	Apple	Jonathan	Sept.	1	30
Sour cherry.	Montmorency	June–July	3	60		Golden Delicious.	do	1	30
Sweet cherry.	Bing	July–Aug.	1	20		Stayman Winesap.	Oct.	1	30
	Napoleon	do	1	20	Grape	Concord	Aug.–Sept.	2	16
Apricot	Moorpark	Aug.	1	20		Goethe	Sept.	2	16
	Wenatchee	do	1	20		Extra	do	2	16
Peach	Early Elberta	do	2	40					
	Elberta	Aug.–Sept.	2	40					
	J. H. Hale	do	2	40					

See footnotes at end of table.

TABLE 1.— *Varieties suggested for medium-sized gardens in districts 1 to 6 of figure 1*— Continued

DISTRICT 4 (MUCH OF EASTERN AND SOUTHERN KANSAS, NORTHERN AND CENTRAL WESTERN OKLAHOMA, MOST OF THE PANHANDLE AND WESTERN AREAS OF TEXAS, AND MUCH OF THE EASTERN AND RIVER VALLEY AREAS OF NEW MEXICO)

Fruit or nut	Variety for whole or designated part	When ripe	Plants	Length of row	Fruit or nut	Variety for whole or designated part	When ripe	Plants	Length of row
			No.	*Feet*				*No.*	*Feet*
Strawberry	Blakemore (east)	May–June	50	100	Blackberry	Eldorado (east)	June	20	80
	Dunlap (east)	July	50	100	Dewberry	Lucretia (east)	do	20	100
	Mastodon (east)	May; Sept.–Oct.	50	75		Young (west)	do	20	100
Raspberry	Black Pearl (east)	June	20	50	Plum	Lombard	July	5	100
	Cumberland (east)	do	20	50		Gold	do	5	100
Sour cherry	Early Richmond	July	1	20		America	do	5	100
	Montmorency	do	1	20	Peach	Carman	June	2	40
Cherry-plum hybrid	Opata	June	1	15		Halehaven	July	2	40
	Sapa	do	1	15		Elberta	do	2	40
	Compass	do	1	15		Lodi	July	1	30
Grape	Concord (east)	July	5	40	Apple	Jonathan	Aug.–Sept.	1	30
	Niagara (east)	do	5	40		Winesap	Oct	1	30
	Extra (east)	Aug	5	40	Pear	Kieffer	Sept	1	20
	Beacon (central)	July–Aug	5	40		Douglas	do	1	20
	Armalaga (central)	Aug	5	40	Jujube	Lang	Aug.–Sept.	1	15
	Extra (central)	do	5	40		Sui Men	do	1	15
	Caco (west)	July–Aug	5	40		Li	do	1	15
	Goethe (west)	do	5	40					
	Ellen Scott (west)	do	5	40					
	Extra (west)	Aug	5	40					

DISTRICT 5 (CENTRAL AND SOUTHERN OKLAHOMA, NORTHERN HALF OF EASTERN AND CENTRAL TEXAS, AND THE UPPER PORTIONS OF THE RIO GRANDE AND PECOS RIVER VALLEYS INTO SOUTHERN NEW MEXICO)

Strawberry	Blakemore	Apr.–May	50	100	Peach	Dr. Burton	July	2	40
	Klondike	do	50	100		Elberta	do	2	40
Grape	Extra	July	4	32		Frank	Aug	2	40
	Carman	Aug	4	32	Pear	Kieffer	do	2	40
	Thomas	Aug.–Sept.	2	40	Apple	Helm	July	2	60
	Scuppernong	do	2	40		Bledsoe	Aug	2	60
Fig	Celeste (south)	June–July	2	40		King David	do	2	60
Dewberry	Young	June	30	180	Pecan	Moore (east)	Sept	4	(6)
Blackberry	Early Wonder	do	20	50		Stuart (east)	Oct.–Nov	4	(6)
Plum	Bruce	June–July	1	20		Burkett (west)	Oct	4	(6)
	America	do	1	20		Schley (west)	Oct.–Nov	4	(6)
	Gold	July	1	20	Oriental persimmon	Tanenashi (south)	Aug.–Sept	4	60
	Santa Rosa	do	1	20	Jujube	Lang	do	2	30
						Sui Men	do	2	30
						Li	do	2	30

DISTRICT 6 (SOUTHERN TEXAS)

Strawberry	Klondike (east)	Apr.–May	50	100	Plum [7]	Methley	May	2	40
	Ranger (west)	do	25	50		Bruce	June–July	2	40
Grape	Extra	Aug	4	32		Gold	July	2	40
	Thomas	July–Aug	2	40	Peach [7]	Hiley	June	2	40
	Scuppernong	do	2	40		Pallas	do	2	40
Fig	Celeste	June–July	2	40		Leona	July	2	40
	Brown Turkey	do	2	40	Pecan	Moore	Sept	4	(6)
Blackberry	Advance	May	20	100		Stuart	Oct.–Nov	4	(6)
Dewberry	Young	May–June	20	120	Oriental persimmon	Tanenashi	Aug.–Sept	4	60
					Satsuma orange	Wase (south)	Oct	6	120

[1] 2 or more varieties of pears, some plums, sweet cherries, apples, and muscadine grapes (including 1 male vine) must be planted to provide for cross-pollination.
[2] Requires winter protection. [3] Not in northwestern Colorado.
[4] Concord may be grown in some protected locations.
[5] Requires winter protection in Kansas. [6] 60 feet apart around buildings.
[7] Not adapted in extreme southern part; should be planted only where quarantine regulations permit.

Muscadine grapes are adapted to the greatest number of locations and conditions, except in the more northern districts, where the bunch grapes are better adapted. The muscadines produce heavily without spraying and furnish fresh fruit for over a long period, as well as fruit for jellies, preserves, and beverages.

Pecans are very widely used as shade trees for the home and yard and are well adapted for this purpose. The nuts are high in food value. The fig also is well adapted to the southern half of the region; it does best when not cultivated and should be planted near a building or in a part of the yard that is kept in grass; otherwise the tree is soon killed by root knot nematodes.

Strawberries are also well adapted to this region. They are the first fruit to ripen, are of fine flavor, and except for citrus fruits are highest in vitamin C content of any fruits that can be grown in this region. Even when frozen, strawberries keep their high vitamin C content for many months. Therefore, strawberries should be a part of almost every garden.

The Young and Boysen dewberries succeed in southeastern Kansas, eastern Oklahoma, and most of Texas. Their high flavor, productiveness, and vigorous growth enable one to obtain an abundance of high-flavored fruit 1 year after planting.

Strawberries, dewberries, figs, and grapes cover the season from April or May till frost in most of the region. Larger gardens, which include pecans, cherries, peaches, plums, and other fruits, will furnish a greater variety of fresh fruit during much of the year.

Planting and Care

SOURCES OF PLANTS.—No varieties of fruit adapted to the region are grown from seed. All are propagated by commercial nurserymen, who are generally dependable sources of fruit varieties. Names of nurseries can be supplied by the State agricultural extension service.

LOCATION OF PLANTING.—Although it is generally desirable to have the planting near the house and perhaps adjacent to the vegetable garden, this may not be the most favorable location. In general, the planting should not be in a low area but on moderately elevated land or a slope that will provide satisfactory air drainage. In other words, the site should not be frosty. The soil should be reasonably fertile and well drained. A location where the soil tends to remain wet following rain should be avoided. Pecans need a deep soil and figs a site where the roots can run under a building. Fruit trees should not be planted near wood lots or shade trees, since full exposure to sunlight is needed.

NEED FOR IRRIGATION.—Rainfall varies greatly in different parts of the region covered by this leaflet. Where the annual rainfall averages 30 inches or more, irrigation is not necessary in order to grow most of the fruits recommended. Where rainfall is between 15 and 30 inches, sites on deep soil should be selected, and, if possible, irrigation should be provided, particularly for berries. Where the rainfall is less than 15 inches per year, irrigation is essential to the production of almost any kind of fruit.

SIZE OF PLANTING.—The size of the planting will vary with the space available. In some locations there may be space for only a few grapevines on an arbor fence, a few fruit or nut trees around the buildings, or a row or two of berries by the fence. On other places the size of the planting is determined by the needs of the family and by the kinds of fruit that can be grown. Most small gardens (10 by 50 feet to 30 by

50 feet) should consist mostly of berries and grapes. A half-acre garden that includes fruit and nut trees is diagrammed in figure 2.

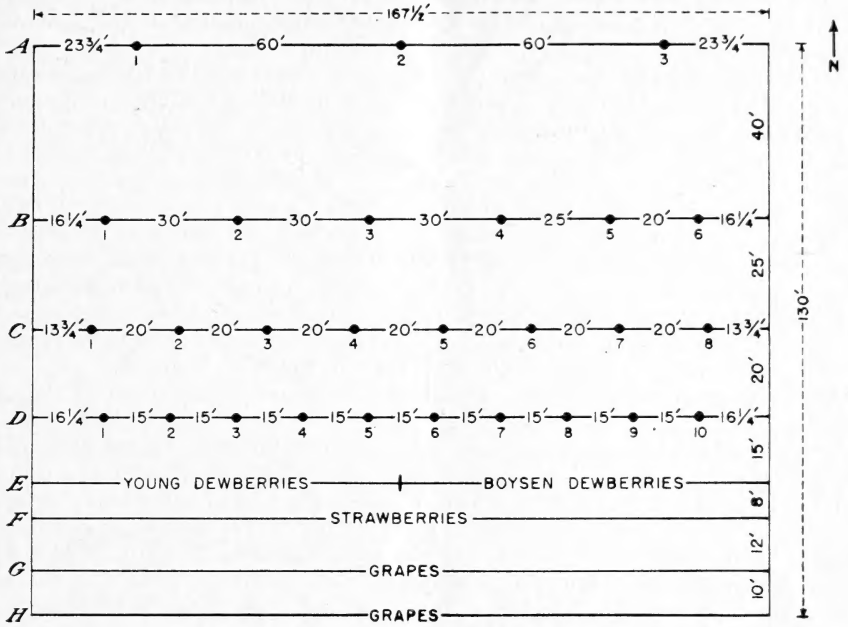

FIGURE 2.—Suggested arrangement for a half-acre fruit and nut garden. Row *A*—Nos. 1 to 3, pecans. Row *B*—Nos. 1 to 4, apples; Nos. 5 to 6, pears. Row *C*—Nos. 1 to 5, peaches; Nos. 6 to 8, plums. Row *D*—Nos. 1 to 10, cherry-plum hybrids. Row *E*—dewberries (22 plants; Young and Boysen). Row *F*—strawberries (2 varieties). Rows *G* and *H*—bunch or muscadine grapes on wire trellises.

WHEN AND HOW TO PLANT.—In the northern districts usually a better stand of trees and plants will be obtained by setting them as early in the spring as it is possible to prepare the soil. In the southern districts planting may be done during late fall or winter. The ground should be prepared as thoroughly as for a vegetable garden. It is important that the plants be entirely dormant, with no buds starting at time of planting; the roots should not be allowed to dry out. Berries and grapes should be set at the same depth as they grew in the nursery. The fruit and nut trees should be set slightly deeper. The roots should be spread out when the plants are set. When the holes are dug the topsoil and subsoil are separated. The topsoil is placed about the roots of the tree in the holes and the subsoil is used last to fill up the rest of the hole. The soil should be thoroughly firmed about the roots to prevent drying out and to help hold the tree in position.

PRUNING BEFORE PLANTING.—Before strawberries are planted all fully developed leaves should be picked off. The canes of dewberries and blackberries should be cut back to 6 inches at time of planting. Grapevines are usually cut back, leaving only one or two buds. If fruit trees obtained from the nursery are unbranched whips, they should be headed back to a height of 3 to 3½ feet. If they have several good-sized branches, well spaced along the trunk, three or four may be left. These should be spaced about a foot apart along the trunk and should point in different directions.

CULTIVATION.—The cultivation of the home fruit garden is similar to that of the vegetable garden for the first part of the season. After about September 1 cultivation of fruit trees, vines, and bushes should cease. Strawberries should be cultivated until the end of the growing season. Under most conditions the same methods of maintaining the fertility of the soil that are followed in a vegetable garden are successful with fruit. Where stable manure is available, its liberal use generally gives excellent results. When manure is not available, a fertilizer high in nitrogen should be used.

PRUNING AFTER THE FIRST YEAR.—To many inexperienced growers the question of how to prune trees and bushes appears to be very complicated. If certain basic principles are kept in mind, however, it is possible for even the inexperienced grower to do a satisfactory job of pruning. The purpose of pruning is to develop the tree or bush so that it will have maximum strength to carry a load of fruit and maximum bearing capacity. A safe rule in pruning trees, particularly young trees up to bearing age, is to prune them as little as will accomplish this specific purpose. Cross branches and suckers should be removed and broken or dying limbs should be cut out. Young trees of most fruits require little pruning before they come into bearing. Pruning of fruit trees in general should be done during the dormant season, preferably in the spring after danger of severe winter freezing is past but before growth of trees has started.

If the grapevine is to be trained to a fence or a wire trellis, it should be tied to a stake and carried upright until it reaches the top. At that point it should be pinched off and two laterals led out, one in either direction, along the wire. During the second season, lateral canes will grow from all the buds along the trunk.

In most cases the vines, if properly cared for, will begin to bear fruit the third year after planting and should continue to produce a satisfactory crop for many years thereafter.

Pruning should be done while the vines are in a dormant condition. It is important to note that the fruit is borne on shoots from the canes of the previous season's growth. In pruning, therefore, enough new wood should be saved to provide for the next summer's crop and the rest should be removed. With healthy, vigorous vines, 50 to 60 buds will produce as much fruit as the vine can mature properly.

Vines of muscadine grapes are pruned somewhat differently. With these the canes laid off on the wires serve as permanent arms and the new growth is pruned so as to leave fruiting spurs 6 to 8 inches long. Such spurs should be evenly distributed along the arm and so spaced as to allow free development of new shoots. All excess wood should be pruned away.

In central and southern Texas the pruning of dewberries and blackberries consists in removing all the canes, both old and new, after the fruit has been picked. New canes will then develop strong growth to produce fruit for the following season. In northern Texas and northward the season is not long enough for strong new canes to grow. There just the old canes that have fruited should be cut out after the fruit has been picked. The new canes of dewberries are left till the following spring, when they are tied in a spiral to stakes standing about 6 feet above ground or to a wire trellis about 3 feet above ground. Winter pruning of the blackberry consists in cutting back lateral branches to about 12 inches.

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